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**From:** Kenneth Roller (Services - 6) [/O=DOMINION/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=KENNE64]  
**Sent:** 3/1/2016 4:36:12 PM  
**To:** Jason E Williams (Services - 6) [/O=DOMINION/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=JASO508559]  
**CC:** Cathy C Taylor (Services - 6) [/O=DOMINION/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=Cathy25]  
**Subject:** FW: Dominion, Possums Point - Outfall 010 72" Culvert Plug Design  
**Attachments:** C150132-00-S-B2-S001\_S00000\_R000.pdf

Jason,

They are scheduled to begin work tomorrow on the final plugging of the 72" Outfall 010 pipe at Possum Point. The first step will be to pour a one-foot thick concrete wall in the pipe at the downstream end. After that cures (~3 days) they will make additional pours to completely fill the pipe over the next week. I left messages with Susan Mackert and Bryant Thomas to let them know this was going to start tomorrow just in case someone calls and wants to know what's going on.

Ken

**From:** John Klamut [mailto:J.Klamut@gaiconsultants.com]  
**Sent:** Tuesday, March 01, 2016 3:54 PM  
**To:** Kenneth Roller (Services - 6)  
**Cc:** Doug Wight (Generation - 34); Scott Quinlan  
**Subject:** Dominion, Possums Point - Outfall 010 72" Culvert Plug Design

Ken,

I spoke to Scott and I understand you have the details you need for the plug design. Just in case, I attached the latest outfall 010 72" culvert plug drawing.

Thanks,

John

**From:** Chris Hennessey

**Sent:** Monday, February 29, 2016 8:21 AM

**To:** Jerry K Miles (Generation - 34) <[Jerry.K.Miles@dom.com](mailto:Jerry.K.Miles@dom.com)>

**Cc:** Michael A Glagola (Generation - 34) <[michael.a.glagola@dom.com](mailto:michael.a.glagola@dom.com)>; Reuben Williams <[rwilliams@gloverconstruction.com](mailto:rwilliams@gloverconstruction.com)>; Leonard C Pope (Generation - 34) <[Leonard.C.Pope@dom.com](mailto:Leonard.C.Pope@dom.com)>; Doug Wight (Generation - 34) <[doug.wight@dom.com](mailto:doug.wight@dom.com)>; David R Payne (Generation - 34) <[david.r.payne@dom.com](mailto:david.r.payne@dom.com)>; John Hollar <[j.hollar@gaiconsultants.com](mailto:j.hollar@gaiconsultants.com)>; Scott Quinlan <[s.quinlan@gaiconsultants.com](mailto:s.quinlan@gaiconsultants.com)>; John Klamut <[J.Klamut@gaiconsultants.com](mailto:J.Klamut@gaiconsultants.com)>; Robert Bee <[r.bee@gaiconsultants.com](mailto:r.bee@gaiconsultants.com)>

**Subject:** RE: Dominion, Possums Point - Pour Volumes

Hello Jerry,

The dowels will be 18" vertical X 30" horizontal. Attached is an updated drawing with the requested information added.

Thank you,

**Notice:** I am scheduled to be out of the office from Wednesday, March 9<sup>th</sup> until Monday, March 28<sup>th</sup>. I will have limited access to e-mail and phone calls during this time. If you need assistance, please contact Robert Bee, Jason Truckenbrod, or another member of the project team. Thank you,

**Christopher M. Hennessey, PE, LEED AP**  
Assistant Engineering Manager

Energy Business Unit

**GAI Consultants, Inc.**

500 Cranberry Woods Drive, Cranberry Township, PA 16066

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00012887

**From:** Jerry K Miles (Generation - 34) [<mailto:Jerry.K.Miles@dom.com>]

**Sent:** Monday, February 29, 2016 7:55 AM

**To:** Chris Hennessey <[C.Hennessey@gaiconsultants.com](mailto:C.Hennessey@gaiconsultants.com)>

**Cc:** Michael A Glagola (Generation - 34) <[michael.a.glagola@dom.com](mailto:michael.a.glagola@dom.com)>; Reuben Williams <[rwilliams@gloverconstruction.com](mailto:rwilliams@gloverconstruction.com)>; Leonard C Pope (Generation - 34) <[Leonard.C.Pope@dom.com](mailto:Leonard.C.Pope@dom.com)>; Doug Wight (Generation - 34) <[doug.wight@dom.com](mailto:doug.wight@dom.com)>; David R Payne (Generation - 34) <[david.r.payne@dom.com](mailto:david.r.payne@dom.com)>; John Hollar <[j.hollar@gaiconsultants.com](mailto:j.hollar@gaiconsultants.com)>

**Subject:** FW: Dominion, Possums Point - Pour Volumes

**Importance:** High

Good morning Chris.

When can we get this measurements? I have a contractor waiting for then this morning. Please advise? Also, Doug are you going to require a new drawing or can Chris just send the measurements?

Thanks so much.

J. Kevin Miles

Project Manager-Possum Point

Fly Ash Removal

803-983-3344

**From:** Michael A Glagola (Generation - 34)

**Sent:** Saturday, February 27, 2016 11:20 AM

**To:** Jerry K Miles (Generation - 34)

**Subject:** FW: Dominion, Possums Point - Pour Volumes

FYI Looks like we're getting closer to a resolution.

Mike

**From:** [D.R.Payne@comcast.net](mailto:D.R.Payne@comcast.net) [<mailto:D.R.Payne@comcast.net>]

**Sent:** Saturday, February 27, 2016 11:18 AM

**To:** [C.Hennessey@gaiconsultants.com](mailto:C.Hennessey@gaiconsultants.com)

**Cc:** Michael A Glagola (Generation - 34); [j.hollar@gaiconsultants.com](mailto:j.hollar@gaiconsultants.com); Scott Quinlan; Leonard C Pope (Generation - 34); Doug Wight (Generation - 34); John Klamut; John DeBarbieri; Robert Bee; Abby Stemler; John A Cima (Generation - 34); [J.Truckenbrod@gaiconsultants.com](mailto:J.Truckenbrod@gaiconsultants.com); David R Payne (Generation - 34)

**Subject:** Re: Dominion, Possums Point - Pour Volumes

Chris,

Thank you for revising these details and providing the safety factor calculations. The pour sequence is acceptable and we agree that once the first pours are cured the pipes will be sufficiently restrained and be able to take the load from the flowable fill without concern of the pipes moving. Please note on the drawing that the "First Pour" reinforcing of 3 sets of (2)#5 dowels are not straight dowels, please provide some dimensions as guidance for the contractor so that these stirrups can be made prior to installation.

If you have any questions or would like to discuss any additional issues with this project please contact me at your convenience.

Ray

D. Ray Payne, PE

Dominion Resources Services, Inc

804-273-3548

Cell 804-363-7695



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**From:** "Doug Wight (Generation - 34)" <[doug.wight@dom.com](mailto:doug.wight@dom.com)>  
**To:** "d r payne" <[d.r.payne@comcast.net](mailto:d.r.payne@comcast.net)>  
**Sent:** Saturday, February 27, 2016 10:36:51 AM  
**Subject:** Fwd: Dominion, Possums Point - Pour Volumes

Sent from my iPhone

Begin forwarded message:

**From:** Chris Hennessey <[C.Hennessey@gaiconsultants.com](mailto:C.Hennessey@gaiconsultants.com)>  
**Date:** February 26, 2016 at 4:34:46 PM EST  
**To:** "David R Payne (Generation - 34)" <[david.r.payne@dom.com](mailto:david.r.payne@dom.com)>, "Michael A Glagola (Generation - 34)" <[michael.a.glagola@dom.com](mailto:michael.a.glagola@dom.com)>  
**Cc:** "Doug Wight (Generation - 34)" <[doug.wight@dom.com](mailto:doug.wight@dom.com)>, "John A Cima (Generation - 34)" <[John.A.Cima@dom.com](mailto:John.A.Cima@dom.com)>, John Hollar <[j.hollar@gaiconsultants.com](mailto:j.hollar@gaiconsultants.com)>, Scott Quinlan <[s.quinlan@gaiconsultants.com](mailto:s.quinlan@gaiconsultants.com)>, "Leonard C Pope (Generation - 34)" <[Leonard.C.Pope@dom.com](mailto:Leonard.C.Pope@dom.com)>, John Klamut <[J.Klamut@gaiconsultants.com](mailto:J.Klamut@gaiconsultants.com)>, John DeBarbieri <[J.DeBarbieri@gaiconsultants.com](mailto:J.DeBarbieri@gaiconsultants.com)>, Robert Bee <[r.bee@gaiconsultants.com](mailto:r.bee@gaiconsultants.com)>, Abby Stemler <[A.Stemler@gaiconsultants.com](mailto:A.Stemler@gaiconsultants.com)>, Jason Truckenbrod <[J.Truckenbrod@gaiconsultants.com](mailto:J.Truckenbrod@gaiconsultants.com)>  
**Subject:** RE: Dominion, Possums Point - Pour Volumes

Hello David,

We have calculated that thrust force acting on the plug wall due to the first lift (revised from 3'-0" to 2'-0") is 1,800 pounds. The frictional resistance provided by the end segment is 6,400 pounds, resulting in a factor of safety of 3.6. Once the first lift has cured, the next several segments will be engaged to provide friction resistance as well and the safety factor increases. Once the first two (2) lifts have cured, the plug wall will be encased and the remainder of the pipe may be backfilled without applying lateral load to the wall. Therefore, the proposed sequence to backfill the culvert is adequate to prevent the culvert segments from moving due to the wet weight of the backfill material.

Attached is our updated construction drawing. We have revised the first and second lift heights and also specified that the first lift consist of 3,000 psi concrete.

Let us know if you have any additional questions or comments. Thank you,

**Christopher M. Hennessey, PE, LEED AP**  
Assistant Engineering Manager

Energy Business Unit

**GAI Consultants, Inc.**

500 Cranberry Woods Drive, Cranberry Township, PA 16066

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